

ABSTRACT OF THE DISCLOSURE

Both a connection server and a relay connection server are installed in an IP transfer network; a function similar to a line connection control of a subscriber exchanger is applied to a connection server; a function similar to a line connection control of a relay exchanger is applied to the relay connection server; and a terminal-to-terminal communication connection control method with using the IP transfer network is realized in such a manner that a telephone set and a terminal such as an IP terminal and a video terminal transmit/receive an initial address message, an address completion message, a call pass message, a response message, a release message and a release completion message, which can be made in a 1-to-1 correspondence relationship with line connection control messages of the common channel signalling system.

Furthermore, while an address administration table is set to a network node apparatus of an IP transfer network, means for registering addresses of the terminals into the address administration table is employed, so that an IP packet communication by a multicast manner can be realized with improving information security performance.